

# REMARKS

Applicant has carefully considered the Office Action of May 12, 2008. Applicant wishes to express his appreciation to the Examiner for the indication of allowable subject matter.

The present response is intended to fully address all points of objection raised by the Examiner, and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Claims 80, 82-83, 106-107, 117 and 124-126 have been amended. Claims 81, 84, 103-105, 108, 110, 116, 118-122 have been deleted. Therefore, claims 80, 82-83, 85-102, 106-107, 109, 111-115, 117 and 123-127 remain in the case.

The present invention discloses a portable device and a system for preparing a beverage drink, either hot or cold, utilizing the Peltier principle applied to heating/cooling a potable liquid, such as treated water. A predetermined volume of a potable base liquid and a predetermined quantity of at least one brewing ingredient, such as espresso grains, are both provided within a portable drink container. The brewing ingredient is kept isolated from the potable base liquid within a sealed compartment.

When a portable heating/cooling unit, comprising at least one water pump and a heating/cooling element configured to operate on the Peltier principle, is removably attached to the portable drink container and operated, the base liquid is drawn out of the drink container and heated/cooled to a predetermined temperature as controlled by a controller. Thus, when the heated/cooled base liquid is returned to the drink container by passage through the sealed compartment, the brewing ingredient is forced by pressure into the portable drink container to form a ready-to-drink brew.

Claim 80 has been amended to more clearly define the type of heating/cooling unit used in the inventive device, which is one based on the well-understood Peltier effect known to those skilled in the art. This type of heating/cooling unit is chosen to enable the device and system of the present invention to provide both a

hot and a cold drink. This fact is frequently referenced by use of the descriptive term: "heating/cooling" which is consistently used by the Applicant, unless specifically referring to heating a brew.

The Applicant respectfully traverses the Examiner's objection that the "specification fails to support both heating and cooling by a single element." On the contrary, this is sufficiently supported in the specification at page 4, paragraph 2, lines 21-22 wherein the specification describes a device comprising "a heater rod...which may also be used for making a cold drink on the Peltier principle...". Furthermore, Fig. 8 is described as clearly showing "an embodiment...for preparing a hot or cold beverage drink..." (p.6). Yet again, the device is described as "...adaptable for use with a heater/cooler device by inserting a heater/cooling element 132 (as in Fig. 8)..."(p.9). Also, on page 13, reference is made to a "heating/cooling element 132, such as a Peltier or equivalent heating/cooling element".

The specification further supports the concept of the use of the Peltier effect in the invention in that "...water 92...is made to flow over the surface of heating/cooling element 132...until the water 92 has reached a desired temperature..."(p. 13, lines 10-11). The temperature of water 92 is described as neither hot nor cold, but depends on heating/cooling element 132 itself to produce both heat and cold at its opposite electrical poles, or alternatively, on the same pole when the polarity of the current supplied to the element is reversed. This is the basis of the Peltier effect and clearly is the principle of the operation of heating/cooling element 132 which by definition meets the criterion of a Peltier element.

In light of the above remarks claim 81 is deleted and claims 80, 82-83 have been currently amended.

The Examiner has rejected claims 80-83, 85-86, 92-94, 103-110, 116, 118-122 and 124-127 stating anticipation under Sec 102 citing US Pat. No. 6,517,878 to Heczko; or obviousness under Sec. 103 citing Heczko in view of US Pat. No. 6,766,106 to Roberson, or in

view of US Pat. No. 6,172,340 to Chang, or in view of US Pat. No. 4,738,378 to Oakley.

Heczko suggests a beverage preparation system comprising a cartridge within a housing having a hollow interior and a collapsible bag, a compressible bottle containing a liquid, and a cartridge comprising a concentrate within the hollow interior or within the collapsible bag. As claimed in claim 21, Heczko teaches a compressible bottle comprising a combination of a first inner bottle and a second outer bottle interconnected to hold a liquid which differs from the Applicant's "cup unit including an inner cup 42 and an outer cup 12."

Heczko provides a cartridge 104a with a nipple 106 for drinking from, and as typically used for powdered baby formula mixes which is not the use or motivation of the Applicant's cup unit. The cartridge 104b in Heczko, alternatively, uses a push-pull top 108 for powdered juice mix or sports drink, but this is different from the Applicant's invention which utilizes preformed orifices such as a lip for drinking which, prior to use, is sealed and opened by puncturing.

Furthermore, Heczko differs both functionally and structurally from the Applicant's invention. Heczko requires a user to insert a cartridge within the water-filled bottle, to invert the bottle to initiate displacement of the water, to squeeze the bottle, and to shake it. The operation is a manual one requiring squeezing and relaxing pressure on the bottle, whereas in the Applicant's invention, this is accomplished mechanically and cyclically by a pump unit.

The inner and outer bottles in Heczko are threaded together, whereas the Applicant's invention comprises an inner and outer cup which are integrally formed. Thus there is no basis for considering anticipation under Heczko, since the context and structure differ from that of the Applicant's invention.

As stated in the decision in *In Re Marshall*, 198 USPQ 344 (1978), "To constitute an anticipation, all material elements

recited in a claim must be found in one unit of prior art...". Since the Heczko reference neither 1) identically describes the invention, nor 2) enables one skilled in the art to practice it, Applicant deems the 102 rejection improper, and respectfully requests that it be withdrawn.

The Examiner has rejected claims 80-83, 85-86, 92-94, 103-110, 116, 118-122 and 124-127 stating obviousness under Sec. 103 citing Heczko in view of US Pat. No. 6,766,106 to Roberson, or in view of US Pat. No. 6,172,340 to Chang, or in view of US Pat. No. 4,738,378 to Oakley.

Roberson in US Pat. 6,766,106 teaches an apparatus and method for preparing infant formula, much like the motivation of Heczko. The infant formula is prepared from powdered formula by dispensing water "into a baby bottle containing the powdered infant formula for mixing". The Applicant's invention already contains a potable base liquid and a beverage element with dried edible ingredients for making a drink and separated one from another by at least one sealed chamber. It does not need adding water into a "reservoir" as Roberson teaches. Roberson suggests using tap water requiring pre-treatment ("boiling and cooling") and then, when added to the reservoir, heating the water to "normal body temperature" for use with baby formula fed to infants.

Further, the heating element only heats slowly "unlike coffee makers" and does not cool, as in the Applicant's invention, using the Peltier principle. The primary purpose of the Applicant's invention, in one embodiment thereof, is to prepare espresso drinks which require rapid heating; not so in Roberson, whose primary purpose is preparing water for filtering and sterilization and emphasizes the use with infant formula.

Chang in U.S. Pat. 6,172,340 teaches "a plurality of protective strips" that act "as a heat isolation barrier." In contrast, the present invention utilizes ribbing which protrudes from the cup and act not only as a heat barrier, but actually are

formed to disperse excess heat into the air to enable comfortable handling of a hot cup filled with, for example, an espresso drink.

Oakley *et al* in U.S. Pat. 4,738,378 introduces water into a sachet from a reservoir to mix with the contents of the sachet which is thereafter discarded. This is unlike the environmentally friendly cup in the Applicant's invention which retains the used brewing element and is disposable together with the cup. The sachet in Oakley is an add-on and not built-into a cup and therefore requires separate disposal, which is messy. Furthermore, the system is not a portable "beverage dispensing apparatus", but loaded into "an open door of the machine" rather than being built-into the system of a portable self-contained cup unit as in the Applicant's invention.

Therefore, the patents to Roberson, Chang, or Oakley add nothing to the teaching of Heczko which would render the present invention obvious.

It is the Applicant's position that the combination of the Heczko and Roberson, Chang, or Oakley references to form the basis of the Sec. 103 rejection is improper, and Applicant respectfully requests that it be withdrawn.

Therefore, independent claims 80, 106, and 128 are deemed to be patentable, and the dependent claims are deemed to be patentable as being based thereon.

In citing the references under Sec. 103(a), the question is raised whether the references would suggest the invention, as stated in the decision of *In Re Lintner* (172 USPQ 560, 562, CCPA 1972):

In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination or other modification.

Similarly, *In Re Regel* (188 USPQ 136, CCPA 1975) decided that the question raised under Sec. 103 is whether the prior art taken

as a whole would suggest the claimed invention to one of ordinary skill in the art. Accordingly, even if all the elements of a claim are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill would have been prompted to combine the teachings of the references to arrive at the claimed invention.

Simply put, and as stated in *In Re Clinton* (188 USPQ 365 CCPA 1976), "do the references themselves... suggest doing what appellants have done", such that there is a requirement that the prior art must have made any proposed modification or changes in the prior art obvious to do, rather than obvious to try. As stated in *Application of Wesslau*, 353 F.2d 238, 241 (CCPA 1965):

It is impermissible within the framework of Sec. 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.

The Examiner is relying on speculation and hindsight reconstruction of the references in view of the invention.

As stated in *Grain Processing Corp. v. American Maize-Products Corp.*, 840 F.2d 902, 908 (Fed. Cir. 1988):

Care must be taken to avoid hindsight reconstruction by using the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.

As stated in *Re Dance*, 160 F.3d 1339, 1343 (Fed. Cir. 1998), before prior art references can be combined or modified, there must be some suggestion or motivation found in the art to make the combination or modification.


The only motivation for the modification suggested by the Examiner is provided by the Applicant's invention. The Applicant is the first to recognize the need for a portable beverage preparation

device incorporating the features outlined above, including a Peltier effect heating/cooling element.

It is respectfully put forward by the Applicant that there is no reason to consider the prior art references, Heczko, Roberson, Chang, or Oakley either individually or in combination, as rendering the invention obvious under Sec. 103, especially since none of these references discloses a portable beverage preparation device with the integration of the feature of a Peltier effect heating/cooling element as outlined above. Therefore, the present invention is deemed to be patentable.

In view of the foregoing remarks, all of the claims in the application as currently amended are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,

  
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